



MAKING WAVES

A maritime news brief covering:

- **MARITIME SECURITY**
- **MARITIME FORCES**
- **SHIPPING, PORTS AND OCEAN ECONOMY**
- **MARINE ENVIRONMENT**
- **GEOPOLITICS**

EDITED BY:

Capt Sarabjeet S Parmar

execdir.nmf@gmail.com

Mr. Oliver N Gonsalves

associatefellow1.nmf@gmail.com

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MARITIME SECURITY

EIGHTY FOUR FOREIGN VESSELS DRIVEN OUT OF INDONESIA'S BINTAN WATERS

- Murukesh

Hong Kong: China's territorial hunger and thirst of strategic expansions has ruffled the wrong feathers not just with India but also countries sharing the waters of East China Sea. Japan, for instance, has been fairly a global player since the World War but the tables have considerably turned in these 75 years.

There's a storm brewing and China is once again at the centre of it, guiding the wind and steering the vessel. Only this time it's not India.

East China Sea is a crucial stretch of contention between China and Japan and the Red Dragon's advancements and disputed claims over the Senkaku/ Diaoyu islands could possibly spark a new political tension in Asia in the coming years.

While China shares its borders (land and sea) with 14 countries, it is at loggerheads with most of them, including islands such as Taiwan.

Tensions around the East China Sea stretch, roughly 1,200 miles (1,900 kilometres) southwest of Tokyo, have been brimming for years. With both countries claiming over the region for hundreds of years, neither Japan nor China is expected to pull their mast down over the territory which is considered "a national birthright" in both Beijing and Tokyo, according to CNN.

Both claim authority over the uninhabited islands, known as the Diaoyus in China and the Senkakus in Japan, but Japan has administered the area since 1972.

However, since mid-April this year, Japan has spotted 67 Chinese government ships near these waters, much to their chagrin. The Japanese coastguard had last week claimed that they had spotted Chinese government ships in the waters near the Senakaku/Diaoyu Islands, heightening the already tense situation.

If Japan retaliates, the move could trigger a massive conflict in the region which will even drag in the United States since Washington is obligated to defend Tokyo due to a defence treaty between the two countries if a foreign power attacks Japan or any of its territories.

'War of words'

"The Senkaku Islands are under our control and are unquestionably our territory historically and under international law. It is extremely serious that these activities continue. We will respond to the Chinese side firmly and calmly," Yoshihide Suga, Japan's chief cabinet secretary, said on Wednesday (June 17).

The Chinese Foreign Ministry echoed similar sentiments albeit their own standpoint, and said, “The Diaoyu Island and its affiliated islands are an inherent part of China’s territory, and it is our inherent right to carry out patrols and law enforcement activities in these waters.”

State-run Chinese newspaper Global Times put out a report saying ‘Japanese conservatives disrupt recovering China-Japan ties by hyping Diaoyu Islands dispute’, criticising Japan for attempts in the Okinawa prefecture to alter administration of the islands. It claimed such a move could harm Japan-China relations.

Source: [timesnownews.com](https://www.timesnownews.com); 23 June 2020

THERE IS A PRESSING NEED FOR INDIA TO DEVELOP A COMPREHENSIVE UNDERWATER DOMAIN AWARENESS STRATEGY

- Vijay Gokhale

At a time when China’s pre-meditated military moves along our northern boundary are drawing the nation’s attention, it is important that we don’t lose sight of our surrounding seas. Our navy has interdicted Chinese maritime research and survey vessels that entered our Exclusive Economic Zone (EEZ) and Continental Shelf (CS) without our prior consent in 2018 and 2019. India has legislation (Act No. 80/1976) that requires foreign marine scientific vessels to seek licence prior to undertaking activities. The Chinese claim that they are serving the interests of global scientific research. That may well be one purpose; but it is well-known that China uses civilian research vessels to gather crucial oceanographic data, such as sub-sea and sea-bed conditions, for military purposes. It has done so in the South China Sea without heed to protests by claimant states or international law. To put this into perspective, one recent survey done by the Asia Maritime Transparency Initiative (CSIS), shows that between April 2019 and March 2020, China deployed 25 maritime survey missions in the Indo-Pacific. This figure is only marginally less than the 27 missions mounted by the next six countries taken cumulatively – US (10), Japan (6), India (4), Australia (3), France (3) and the Philippines (1).

Earlier this year, the Australians voiced concern over the activities of the Chinese vessel Xiang Yang Hong No. 1 in international waters between the Australian mainland and Christmas Island. They suspected that aside from marine science research, the ship was also studying submarine routes from Australia into the South China Sea. This, incidentally, is the same vessel that operated in international waters just south of the Andaman & Nicobar Islands from April 15 to May 21, 2019, presumably with similar objectives. China has mounted at least six survey missions covering the waters between Indonesia and Sri Lanka, in the Bay of Bengal and the Northern Arabian Sea, in 2019-2020.

The Cambodian opposition leader, Sam Rainsy, wrote recently in *Foreign Affairs* that China follows a “pattern of denial and obfuscation” in its military expansion overseas. Beijing initially denied its intention to militarise the Spratly Islands but eventually acknowledged that they serve a military purpose. A similar pattern surrounded the Chinese military base in the Horn of Africa. Nobody any longer accepts China’s claim that the Djibouti base is simply a logistics facility. Rainsy has expressed concern over a secret deal that gives China exclusive access to Cambodia’s Ream Naval Base. If this report is accurate, it will bring China one step closer to our shores. This is not the only concern to be had. It is also believed that PLA Navy (PLAN) intelligence-gathering ships have sailed our coast-line to gather information on naval facilities and ships. It will, almost certainly, do so again.

China may well take the position that both activities are legitimate under international law. The Law of the Sea Convention says that military vessels have “right to innocent passage” to traverse the territorial sea of a coastal state without entering internal waters so long as they are not prejudicial to peace, good order and security of the coastal state. The Convention is also open to different interpretations on the question of scientific surveys in the EEZ of coastal states. The US, for instance, maintains that hydrographical surveys without prior notice or consent are lawful in line with centuries of state practice, customary and international law and Articles 58, 86 and 87 of the Convention. However, it is worth noting that China herself explicitly requires all foreign marine research, and for that matter military, vessels to seek prior permission before they enter China’s territorial seas as defined in their Declaration on the Territorial Sea (1958). The question, therefore, is whether China will respect the laws of other coastal states like India. In that regard, recent Chinese behaviour in the South China Sea does not give reason for optimism.

It is a reasonable presumption that the completion of Gwadar and the use of Ream (Cambodia) if such a report is confirmed, will make it easier for China to sustain naval deployments – including submarines – in the Indian Ocean. The collection of vital hydrographical data is critical to their understanding of the sub-surface environment, particularly around the Andaman Islands, which is a choke-point from the Chinese perspective, as well as to monitor our own submarine movements. It should, therefore, be presumed that in the coming 12-24 months, the Chinese could step up their efforts to secure significantly improved data in the seas between the Malacca Straits and Djibouti, especially in the Bay of Bengal and Arabian Sea, through any one, or all, of the following. First, the Chinese might try to send another survey vessel without our permission into our EEZ, even possibly under naval escort. In May, the Chinese survey vessel Haiyang Dizhi No. 8 accompanied by two Chinese coast guard ships and several fishing vessels (probably maritime militia) entered the Malaysian EEZ in the South China Sea for over a month despite Malaysian protests. Such action would contravene Indian law but the Chinese have never been deterred by finer points of the law. Second, more likely, they might deploy unmanned underwater drones in our EEZ, while the mother vessel remains just outside. A recent Forbes report claims that Sea-Wing underwater, unmanned drones were launched from the Xiang Yang Hong No. 6 in mid-December 2019 and successfully retrieved in February 2020. That should be a matter of our immediate concern as during that period this very ship was in the Bay of Bengal from January 27 to February 24. Third, China might sail PLAN intelligence-gathering ships along our coasts or in the waters off our island territories, just outside

the 12 nautical mile limit, on grounds that this is “innocent passage” by naval vessels permissible under relevant provisions of the Convention; in other words the Chinese version of Freedom of Navigation operations.

We have the necessary capacity to monitor and interdict survey vessels well before they enter our EEZ. The need for a comprehensive Underwater Domain Awareness (UDA) strategy is pressing. This will need coordination between our national security agencies, the navy, and the government departments responsible for the marine environment and disaster management, but also collaboration with like-minded countries who share our concerns. Such cooperation includes, inter alia, deepening of real-time information exchange, co-development and deployment of UDA monitoring devices and joint processing of acoustic signatures, and closer coordination in the patrolling of sea lanes to ensure a free and open Indo-Pacific. The deployment of PLAN intelligence-gathering ships with naval escort along our coasts might also require a new sort of response. We should learn from Chinese tactics. A RAND study describes how they use fishing boats, which are actually “maritime militia”, to overwhelm the external adversary with swarm-tactics, supported from the rear by coast-guard or naval vessels. This is below the threshold of a military response, and a successful, albeit crude, way of blocking the PLAN vessel. We have multiple fishing communities that can be provided with the capacity and training for such purposes. Building Maritime Domain Awareness, and especially Underwater Domain Awareness (UDA) capabilities and technology, both domestically and with like-minded partners, should be given the highest priority. There may not be more time to lose.

This article first appeared in the print edition on June 23, 2020 under the title “Securing the sea lanes”. The writer is a former Foreign Secretary and Indian ambassador to China

Source: indianexpress.com; 23 June 2020

SOUTH CHINA SEA: US AIR FORCE ‘HEADS OUT AGAIN ON SEARCH FOR CHINESE SUBMARINES’

- Lawrence Chung

The US Air Force sent military planes to the Bashi Channel en route to the South China Sea for a sixth day in a row on Friday in what observers said was a mission to track mainland Chinese submarines.

The South China Sea Strategic Situation Probing Initiative, a mainland Chinese think tank under Peking University, said three American warplanes – a EP-3 reconnaissance plane, a P-8A anti-submarine aircraft and a KC-135 aerial refuelling aircraft – appeared in the Bashi Channel between 10am and noon.

In charts posted online, the think tank said the three planes flew briefly into the southwestern part of Taiwan’s air defence identification zone towards the Bashi Channel and then headed to the South China Sea. “US EP-3E (AE1D91) is

reconnoitring in the #SouthChinaSea, June 26. A P-8A and a KC-135 are following up, June 26,” the think tank said in a tweet.

Taiwan’s defence ministry declined to comment on the US military movements, saying only that it was fully aware of foreign military activities around Taiwan and that the armed forces were doing their job to ensure the security of the island and the safety of the Taiwanese public. But it said a People’s Liberation Army warplane briefly approached southwest of Taiwan’s ADIZ in early on Friday afternoon and was warned off by Taiwan’s air force, which scrambled jets to shadow the aircraft. The ministry did not identify the type of the plane.

The PLA aircraft apparently flew into the area shortly after the US warplanes, the ninth such incursion by a mainland aircraft since a US transport plane flew through the southwest coast of the island towards Thailand on June 9. A Taiwanese security source who spoke on condition of anonymity said the US Air Force was apparently carrying out joint missions related to anti-submarine tasks.

“US warplanes have been massively reconnoitring between the Bashi Channel and the South China Sea, indicating that the USAF must have intelligence about PLA Navy submarine movements in the region,” the source said. “With the involvement of a number of different kinds of warplanes, it also shows that the USAF is testing the readiness and reliability of its joint missions in this region.” Su Tzu-yun, a research fellow at the Institute for National Defence and Security Research, said the American forces might have been acting on specific information. “The US warplanes may have intelligence about the PLAN submarines and that could be the reason why the US warplanes were tasked to look for any unusual activities of the PLAN submarines in the Bashi Channel,” Su said.

He said that mainland ballistic missile submarines could attack the United States from the Philippine Sea to the east of Taiwan, and other waters in the region such as the Miyako Strait and the Bashi Channel could become the focus of more military movements Mainland Chinese submarines appear to have been operating near Japan. Last weekend, Japan’s defence ministry said it spotted a foreign submarine, believed to be a mainland Chinese vessel, underwater in a contiguous zone northeast of Amami Oshima Island, in Kagoshima prefecture.

Foreign submarines are required to surface and raise their national flags within territorial waters of other countries in accordance with international law. But underwater activities are not prohibited in contiguous zones, which surround territorial waters. Japan sent Maritime Self-Defence Force destroyers and patrol aircraft to monitor the submarine, which passed through a narrow strip of water between the prefecture’s Tokara island chain and Amami Oshima without surfacing. Japanese media quoted an unidentified SDF source as saying that the submarine might have been testing Japanese and US anti-submarine warfare capabilities.

Japanese Defence Minister Taro Kono said Japanese SDF aircraft also had to scramble daily in response to PLA warplanes approaching Japanese airspace. “In the East China Sea, our fighter jets scramble against Chinese planes almost every day, sometimes more than once,” Kono said on Thursday, adding Beijing had opened a wide gap between the military arsenals of the two countries, building a great number of

submarines, frigates and destroyers. “We need to assess China’s capability and intention.”

He said Beijing had gone from a nation without modern fighter jets, submarines or frigates in the early 1990s to one with more than 1,000 fourth- and fifth-generation fighters, compared with the 300 or so fighter jets that Japan had. Meanwhile, the US-based Defence News said earlier this month that US Secretary of Defence Mark Esper was studying the possibility of building large robot submarines to increase underwater surveillance. According to the report, a study spearheaded by Esper’s internal think tank, the Cost Assessment and Programme Evaluation office, recommended that the US Navy invest in as many as 50 extra-large unmanned underwater vehicles.

Source: semp.com; 26 June 2020

'INDIA SHOULD OPEN ANDAMAN TO US, JAPAN TO TRACK CHINESE SUBMARINES'

The clash in Galwan between the Indian and Chinese armies and the subsequent military build-up by both sides has triggered the worst bout of tension between the two countries in decades.

Interestingly, one domain of competition between India and China has seemingly been ignored in the din over the Galwan debate: The maritime arena. This is perplexing as China's People's Liberation Army Navy (PLAN) has mounted a massive modernisation and shipbuilding programme in the past two decades and also increased forays into the Indian Ocean region.

On Friday, Sujan R. Chinoy, a retired diplomat and seasoned China watcher, argued that India must consider "opening up of the Andaman and Nicobar Islands to the friendly navies of the US, Japan, Australia and France, among others". Chinoy is the director-general of the Manohar Parrikar Institute of Defence Studies and Analyses, a major think tank. Chinoy had served as India's ambassador to Japan and also as consul general in Shanghai. Chinoy expressed his views in a policy brief of IDSA that was published on Friday. Chinoy noted the "Tri-Services Andaman and Nicobar Command (ANC) has progressively emerged as a lynchpin of India’s regional maritime engagement in the Bay of Bengal and the Andaman Sea", where a number of regional navies had made port calls. Chinoy discussed visits to Port Blair of ships of the navies of the UK, Australia and France since the past two decades.

Chinoy noted that Chinese ships and submarines have been making regular forays into the Indian Ocean in recent years and referred to increased ties between Beijing and the governments of Myanmar, Bangladesh and Thailand. Both Bangladesh and Thailand have signed deals for Chinese submarines. Chinoy noted China's interest in the Indian Ocean would increase as its economic and strategic interests grow. This could result in "regular forays by Chinese nuclear submarines". "While monitoring warships is relatively simpler, keeping track of Chinese submarines through a wide strategic anti-submarine warfare (ASW) network is an asset-intensive and complex task," Chinoy explained.

"The Andaman & Nicobar Islands are a strategic asset for India to assert its dominance on the major East-West maritime trade route that passes through the Malacca Strait. It has often been referred to as India's 'unsinkable aircraft carrier' to the East. As close to 80 per cent of China's seaborne trade passes through this region, the possibility of it being throttled raises the spectre of the 'Malacca Dilemma' for China," Chinoy wrote.

Chinoy referred to close cooperation between the US and Japan in anti-submarine warfare based on development of underwater surveillance sensors and deployment of maritime patrol aircraft. "A similar approach for strategic ASW surveillance has been suggested in the Indian Ocean through collaboration between India, Japan, Australia and the US," Chinoy wrote. Chinoy argued that access for US Navy ships to Andaman and Nicobar is in accordance with the Logistics Exchange Memorandum of Agreement the two nations signed. Prime Minister Narendra Modi had agreed to a similar pact with Scott Morrison, his Australian counterpart, in a summit earlier in June. Chinoy said India and Australia "should consider expanding the scope of cooperation by formalising a protocol for ensuring an effective underwater surveillance system".

Source: theweek.in; 27 June 2020

CHINESE NAVY SUBMARINES COULD BECOME A REALITY IN INDIAN OCEAN

- H I Sutton

The Chinese Navy is rapidly pursuing global capabilities. A key area of future operations may be the Indian Ocean. Chinese submarines in particular could have a strategic impact if they were roaming those waters. From China's standpoint this would protect vital sea lanes that will be vulnerable in any war. Naturally many of the world's navies would be concerned if this were the case. Chief among them is the Indian Navy, which currently has the largest submarine fleet in the South Asia region.

Concern about China's naval expansion is a hot topic on the world stage. The U.S. Navy is increasingly pivoting towards Asia. Speaking at the Brussels Forum virtual conference on June 25, Secretary of State Mike Pompeo referenced the Chinese Communist Party's "threats to India" and other countries in Asia. "We are going to make sure that we are postured appropriately to counter the PLA." (People's Liberation Army, which includes the Chinese Navy.) But much of the attention is on the South China Sea, where Beijing has made extensive territorial claims. The Indian Ocean theater seems less of a focus, at least in the public's eye. For India, however, the threat seems very real. Chinese submarines have paid port calls in Pakistan and Sri Lanka in recent years.

During peacetime Chinese submarines would be expected to enter the Indian Ocean through the Strait of Malacca. This should be done on the surface, which makes their presence obvious. China might still do it to send a message, but it is of limited utility in an operational setting where submarines want to hide their presence. In wartime,

Chinese submarines might slip through the Sunda Strait or Lombok Strait. These pass between the chain of Indonesian that separate the Pacific and Indian Oceans. One advantage over the Malacca Strait, which runs past Singapore, is that it would deliver the submarines to the deep water of the eastern Indian Ocean. From there they could take less obvious routes to their targets. The Sunda Strait would be the shortest route, but it is very shallow at its eastern end so the deeper Lombok Strait might be preferred. There a submerged passage is likely considered feasible to the Chinese Navy. Once through into the Indian Ocean, the submarines could get rearmed or resupplied without having to return to China. The Chinese Navy has already built a base in Djibouti on the Horn of Africa. Even if the submarines themselves did not call in to the port, which would be closely monitored, vessels could operate from there to carry out at-sea replenishment.

And there is another Chinese port under construction at Gwadar in Pakistan. Work on an extension of that port, which may include a Chinese naval base, appears to be imminent. Gwadar has an advantage in that it is connected by land to China so supplies would not have to go by sea. If China were to create a permanent Indian Ocean squadron, its natural bases would be Gwadar and Djibouti. There is also the small island of Feydhoofoolhu in the Maldives, which China is developing as a resort. Planners will be concerned that it could act as a support base or monitoring station in some scenarios. For its part, the Indian Navy is also growing its capabilities and modifying its operating patterns to counter the threat. There is evidence that it has been testing its ability to forward deploy submarines to the Andaman and Nicobar Islands. This could hold the key to monitoring submarine activity in the Strait of Malacca. At the same time, the Indian Navy's U.S.-supplied P-8I Neptune aircraft are updating India's anti-submarine reach in to the Indian Ocean and Arabian Sea. Together with the surface navy and the submarine force, this could hope to track Chinese submarine movements.

But in the vastness of the ocean this could be challenging. Even though China's submarines may not be as quiet as their Western equivalents, they have a natural stealth advantage. Even very old submarines pose a serious threat that cannot be ignored in wartime. So for India it will be critical how quickly it can react to a more pervasive Chinese Navy presence in the Indian Ocean.

Source: [forbes.com](https://www.forbes.com); 26 June 2020

DODGING VIRUS, NAVY SHIPS BREAK RECORD FOR STAYING AT SEA

- Lolita C Baldor

WASHINGTON (AP) — The two U.S. warships in the Middle East weren't aiming to break a record. But when the coronavirus made ship stops in foreign countries too risky, the USS Dwight D. Eisenhower and the USS San Jacinto were ordered to keep moving and avoid all port visits. On Thursday, as they steamed through the North Arabian Sea, they notched their 161st consecutive day at sea, breaking the previous

Navy record of 160 days. And they're on pace to crush it, since they won't hit land again until they get home to Virginia later this year.

The milestone, Navy Capt. Kyle Higgins said, "is not one that I think we really wanted but one that the circumstances of the world thrust upon us. And we embraced it with style." When the ships left home in January, COVID-19 was just starting to emerge. By the time they crossed the Atlantic and moved into the Mediterranean Sea, the virus was escalating. In March, Vice Adm. Jim Malloy, the Navy's 5th Fleet commander, ordered a stop to all port visits to reduce the chance of spreading the virus through the fleet. Other ships were battling outbreaks, including the USS Theodore Roosevelt, which got sidelined in Guam.

With that, Higgins, the Eisenhower commander, and Capt. Edward Crossman, the San Jacinto commander, knew their sailors wouldn't set foot on land for some time. Both were interviewed a few days before the ships broke the record. For more than five months, the Eisenhower, an aircraft carrier, and the San Jacinto, the guided-missile cruiser that accompanies it, have been at sea, with no onboard visitors and strict controls over how aircraft deliver their supplies. The isolation has been challenging. Port calls not only give sailors time for rest and relaxation, they also allow experts to come aboard to do difficult repairs. When the San Jacinto's helicopter bay door broke, the crew members had to get creative. It was the middle of the night, and they realized they needed to replace a large sprocket. "My guys did the research, and they said, 'Hey, these 90-pound dumbbells are made from the same material that we need for this gear,'" Crossman said in an interview from the ship. So, they took the dumbbell down to the machine shop and created the part. "If they were magicians," Crossman said, "they'd have 100 rabbits running around the house because they keep pulling them out of their hats."

Petty Officer 1st Class Joshua Grimes, a machinist mate, is one of the sailors responsible for keeping machinery operating. When the door broke, it was his team that figured out how to fix it. "I was skeptical, but the way things were going I didn't really count it out," he said. "Definitely the helo hangar door is the craziest thing we pulled off." On the Eisenhower, crew members had to safely replace a large, critical fan motor for the flight deck. It took four teams from the electrical, engineer, supply and machinist departments, but after consulting with experts on shore, they broke down the fan, got it onto a makeshift platform and installed the new part.

"Normally, this job would have called for cutting into the ship to get it down there," said Higgins. "I'm happy to report that the fan and motor are operating fine and we are 100% operational again because of it." Crew entertainment has also gotten creative. Disappointed sailors watched as they passed countries along the Mediterranean and headed through the Red Sea without stopping.

"This is my first ship as well as my first deployment," said Petty Officer 2nd Class Dionesha Simmons. "It's a bit of a struggle just because I was looking forward to some of the port calls." Instead, she said, she's having fun making brunch for the Eisenhower crew on "Waffle Saturdays." She and others take over to give the cooks a break. Higgins and Crossman said they're trying to give sailors dedicated time off — sometimes a full 24 hours to do whatever they want, other times a couple days off in a row. They plan more swim days and "steel beach picnics" when sailors can wear civilian clothes and

barbecue on the flight deck. The Eisenhower crew had cigar socials with jazz music. One popular event, said Petty Officer 1st Class Travis Bush, was a slam dunk basketball contest that he said relieved stress and showed off some talent.

On the San Jacinto, sailors substituted a mustache contest for the March Madness tournament. The 64-person bracket competed to see who could grow the ugliest mustache. “There’s definitely some disappointment in not going into port, especially considering our original plans. But we’ve made it this far,” Grimes said. “It actually makes a lot of us feel very proud that we can be part of this. ... The longest I’ve been underway is a little over 40 days, and it’s destroyed that record.” The 160-day record was set in February 2002 by the USS Theodore Roosevelt, early in the Afghanistan war. The previous 152-day record was set by the Eisenhower in 1980 during the Iranian hostage crisis. Navy historians say it’s difficult to check long into the past, because records are spotty.

Both ship captains planned celebrations. Crossman said sailors were competing to design the certificate that they’ll get, adding, “We’re kind of proud of the fact that we’re taking the record, but we’re going to blow it away. Higgins ordered “the best dinner” the crew could make, with surf and turf, a big cake and ice cream. He said he’ll wait before gathering the crew for a celebratory photo.

“It’ll be 161 days when we break the record, but we think we may be out here a little bit longer and the potential to pass that mark by quite a bit is fairly good,” he said. “So we might wait for a more round, even number.” Now one critical question remains: Which ship will pull into Norfolk last, snagging the record? “I’ve had a couple requests to see if we could stay out longer to make sure we beat the Ike,” Crossman said with a laugh. Higgins says they’ve joked about it. His response? “Time will tell.”

Source: apnews.com; 25 June 2020

MARITIME FORCES

ROYAL AUSTRALIAN NAVY'S UPGRADED PHALANX CIWS ACHIEVES IOC

- Captain James E. Fanell (Retd)

The Royal Australian Navy's upgraded Mark 15 Phalanx Close-in Weapon System (CIWS) has achieved initial operating capability (IOC) for HMAS Sydney, representing a key milestone. The system has been delivered on schedule and will be progressively rolled out until late 2023 across the navy's destroyers, amphibious ships, and new supply class tankers.

Minister for Defence Linda Reynolds said the Phalanx CIWS delivers improved lethality and a broader range of protection for navy ships in fast-moving combat situations. "The first system, which incorporates the upgrade to Block 1B Baseline 2 of the Phalanx system, has already been installed into HMAS Sydney which will ensure she enters service as Australia's most potent and capable warship. "The system significantly boosts HMAS Sydney's self defence capability, providing new generation technology to navy vessels and ensuring the highest levels of protection from modern systems."

Reynolds further added that this achievement reflects Australia's shipbuilding capability and demonstrates the success of the government's \$90bn Naval Shipbuilding Plan. The upgraded Phalanx CIWS is expected to create opportunities for Australian businesses to benefit from the government's investment in a sovereign shipbuilding capability. Sorry, there are no polls available at the moment.

Last year, the second unit of the upgraded system was delivered. It will be used to provide comprehensive training in the country with support from local industry and increasing self-reliance in the training pipeline. This year, Australia started a Diploma of Digital Technology shipbuilding course as part of the Naval Shipbuilding Plan. It will help connect workers and information systems to build the \$35bn Hunter Class Frigate Programme.

Source: navaltechnology.com; 22 June 2020

EQUIPPING INDIAN NAVY FOR WAR WITH FOCUS ON OPERATIONAL CAPABILITIES — SYNERGY IS KEY

- Commodore G Prakash, (Retd)

‘War is politics by other means’, said the 19th-century Prussian military strategist Carl von Clausewitz. In India, it appears that even ‘procurement for war’, is politics by other means. The pitfalls of this are dangerous for national prestige and security, and they stare us in the face especially in the kind of times that we are in now.

Every professional seeks the best of tools to ply his trade. The armed forces cannot be any different. But there is one criticality in the case of the armed forces, which is, that failure is no option for them. So, it is with much dismay that I watched the recent war of word triggered off by HAL once again entering the Navy’s long-running attempts to get Utility Helicopters (NUH). Somewhere among the discussions on the technicalities of the DPM, DAC, the sublime text of some Para 23 of Chapter II of the Defence Procurement Policy of 2016 (DPP-2016) etc, the criticality of the NUH for the Navy are lost for the common man.

An Excellent Example

I was lucky to operate from the Seaking Mk 42Bs from 1989, when they were brand new. Rightly called Flying Frigates, they could match Frigates in water for operational capabilities. Developed by Westland Helicopters, UK, to our operational specifications developed from 1978 and frozen by 1982, technically known as NSQRs (Naval Staff Qualifying Requirements), 20 helicopters arrived in India between 1988 and 1990.

NSQRs are written through an elaborate process. First, the threat to be addressed is identified, then the best method to optimally mitigate the threat is decided, what is available in the world is evaluated, the money available is considered and finally, the all-important Govt approval is obtained.

When they were born, the 42Bs were the best Multirole Helicopters (MRH) in the world. A true game-changer, it made the Navy proud and we who operated those aircraft felt like real kings of the sea. How else could one have felt, when one could get the entire Makaran coast on one screen, in graphic detail, with a single sweep of the Radar from 5000 feet up in the air? An Indian equivalent in the future was a legitimate fantasy.

A Great Plan Gone Bust

Having handled the affairs of the ALH at Delhi in the initial three years from the first flight of the ALH (Navy), I had a ringside view of how things turned out.

Here is a perspective.

Well understanding the timeless advantages of indigenisation, while pursuing the 42Bs, the Navy also laid down NSQRs for an Indian Multirole Helicopter. It is unrealistic to expect HAL, the lone Aircraft manufacturer in India, to make its maiden helicopter to the standards of established manufacturers like Westland, NSQRs were laid down for a smaller, lighter version. Like for the 42Bs, these too were developed from 1978 and frozen by 1982. The plan was that while the Navy maintained its operational superiority over adversaries with the 42Bs, HAL would make a light MRH, gain critical experience and then graduate to making the replacement for the 42Bs one day. With IAF and Army too needing indigenous helicopters, HAL was onto something big. It was an excellent plan. But it went bust, at least for the Navy.

Maritime Helicopters Are Different

Helicopters for use at sea, especially MRH, greatly differ from their cousins designed for use on land. Being the lone aircraft producer in India, it would have been great if HAL had understood these and worked towards developing proficiencies for use in the future. Here are some examples.

Rotor Hub & Blades

On land, a helicopter can approach for landing from any direction, turn into wind and land. But while landing on a moving ship, this freedom of direction is curtailed. This can be overcome to an extent, through the design of the blade system and the rotor head. Further, to reduce the workload of Pilots during prolonged hover or during landing/ take off, the rotor blades should not be connected directly on to the rotor hub. This is good only on land. The ideal construction of rotor blades for ship operations is the Articulated Blade System which damps inputs to the Pilot reducing his workload.

Boat Like Bottom

While engaged in Anti-Submarine Warfare, one of their staple roles, MRH operate at very low levels, hovering for hours. During prolonged hover, both its fine gas turbine engines are straining to hold up about 10 tons of weight defying gravity. Now, if any engine has a problem, the helicopter has to sit on the water. The Pilots can now attempt a tricky running take off with one engine, from the sea. For this to be practical, the bottom of the helicopter has to be like a boat's.

Extra Focus on Corrosion

Air at low levels at sea are salt-laden. Further, while in hover, helicopters get enveloped by a cloud of fine saltwater spray, which pushes highly corrosive salt into every little pore of the helicopter. To prevent corrosion, special materials are required in certain parts.

Folded Blades& Tail

Space on warships being premium, helicopters have to be made compact for stowage inside hangars. So, their blades, and in the case of larger helicopters, tails too, have to be folded. How compactly the blades be folded, also matters. Because, even when stowed safely inside hangars, helicopters and their blades could move in very violent seas and get damaged. So, they have to be compact, staying well within the confines of hangars, with some leeway for movement in violent seas.

Speed of Blade Spreading& Folding

Torpedoes being a great threat for ships, they have to be ever ready to accelerate fast and manoeuvre violently to outrun incoming torpedoes. However, ships cannot manoeuvre while launching or recovering helicopters, and for the period when blades are being spread or folded. Hence it is important that the entire process of bringing helicopters out from their hangars onto the flight deck, spreading their blades, launching them, recovering them, folding their blades and stowing them in hangars be expeditious. Every second saved is critical for the safety of the ship involved. This is best achieved if done automatically. The five massive 30 feet long blades of the 42Bs

fold or spread in less than a minute, with a complex system involving pneumatics and hydraulics, operated by a single switch in the cockpit.

Helicopters operate during day and night from ships, regardless of rain, wind or waves. When they descend onto the deck for landing, the deck too comes up violently and impacts the helicopter's wheels as the ship lurches over waves. This requires unique features in the undercarriage system.

Basic Weight & Capacity Excess

Helicopters at sea need much excess capacity to carry several sensors that helicopters on land do not carry. Excess capacity is also required for the ability to assume different roles, by carrying different armament. Sufficient fuel is also required to get useful time on a mission, carrying weapons, which, if unused, have to be brought back. For this, the basic weight of the aircraft has to be kept strictly in check.

HAL Went for Scale

For a first-time manufacturer dealing with the differing requirements of the three services, we can't fault HAL for not having focused on the unique naval requirements in the initial years. Despite the Navy highlighting the fact that good maritime helicopters have to be designed primarily as maritime helicopters, HAL went for the majority requirement and produced a helicopter primarily designed for use on land. Converting this for use at sea was an inherently flawed idea. Similar was the case for an automatic blade fold system. Strong advice from the Navy to consult Westland, which had a well-proven system, was ignored. This, despite the Navy giving a written undertaking in 1992 that it will acquire 120 helicopters. An undertaking, which was given almost ten years before the first naval version flew. How much more can any customer show genuine support?

The Aftermath

At first flight, almost 20 years after the NSQRs were frozen, almost every NSQR was unfulfilled. And the subsequent journey has not been encouraging. The net result has been some loss of confidence in HAL over the years and an image of an entity that needs to improve customer relationship. This is bound to reflect in every interaction.

The NUH Story

Light utility helicopters are a godsend in war and peace. They are the ubiquitous 'Angels', on whom rests the great task of saving lives, through SAR. At sea, they are also used to move personnel and light loads from ship to ship, for limited weapon drops and surveillance. For an incredible 60 years, the Indian Navy has managed with the Chetak Helicopter, the Indian avatar of the French Allouette. Every member of the crew that flies this helicopter today must be awarded gallantry medals for just daring to fly them. The need for a replacement has been known for far too long. Formally, the current NUH case dates back to 2008.

HAL & NUH

Synergy among various arms of the state is critical for collective success. While retired Officers or professional watchers would comment on issues based on their past experience and knowledge, it is those currently occupying official positions, who

should treat these as useful suggestions and work for the collective good. Hence it was heartening to see the CMD of HAL Bangalore himself giving an interview shared widely on media. Surely he meant well. But certain inaccuracies and insinuations in that interview were avoidable.

Elected governments in democracies have a tough job of spending money without attracting allegations. Naturally, they would make intricate systems, structures, and regulations for this. However, a pitfall of this is inordinate delays in procurement and loopholes for interested parties to hold up well-meaning processes. HAL's recent re-entry into the NUH case is one such case.

It was only after HAL had earlier admitted to not being able to meet the Navy's requirements for the NUH that the Navy opted for the NUH under the Govt's Strategic Partnership (SP) Model. The SP Model aims for the Indian Company chosen as the Strategic Partner to make a helicopter with more than 60% indigenous components. Compared to this, the 'indigenous' ALH still has only 37% of indigenous components. The NUH is actually the first project which has the potential to fulfil every gain that the SP model envisages. HAL re-entering the fray with a non-existent product, promising wonders in too short a time, may not be helpful. What the CMD mentioned as 'a couple of changes' required to meet the Navy's requirements, are actually work on engines and the rotor hub, which is akin to designing a new helicopter altogether. Moreover, these have been pending for over two decades.

What is to be achieved by scuttling the NUH through the SP model? Is it the emergence of a much-needed competitor, especially in the private sector? If yes, it is sad, because that is against the very aim of the SP model.

CMD HAL's words that the NUH being 'quite a big contract, (people) will be looking at it from a different angle', was avoidable insinuation. Further, by saying that the Navy was looking 'at some foreign OEM's aircraft, particularly one aircraft' and that 'specific NUH RFQ/ RFI was designed for that', he virtually cast aspersions on the wisdom, propriety and authority of the MoD. Moreover, the process of shortlisting and procurement is that of the Defence Acquisition Council headed by the RM and the Empowered Project Committee, with a very limited role of the Navy. The insinuation is therefore on the bureaucrat driven acquisition system, that too before the process has even begun.

Working Towards Victory

Down history victories have been claimed by the gloved hand that wields the sword and failures dumped on the rust at the cutting edge of the sword. It is the hand that must keep the sword sharp. The Navy and the MoD understands this and strive untiringly for it, despite the inherent limitations of processes. The fighting man has proven time and again that he will fight with whatever is available. What is promised in the future is of no use to him, as it doesn't scare the enemy in front of him.

Departments going by the advice of senior veterans who were rabidly anti-import while they were in service, even at the cost of operational efficiency, will have limitations in seeing the light. The motivations that drove them while in uniform, that too when they were directly responsible for conducting war, are only likely to be

stronger now, creating blindness to the dire needs of operational efficiency. It is important to remember, that synergy is key.

(The author is a Specialist in Aviation and Anti Submarine Warfare. In his career spanning 35 years in the Navy he has held several Command and Staff appointments at sea and ashore. Views expressed are personal.)

Source: financialexpress.com; 23 June 2020

JAPAN CONSIDERS FLOATING ISLANDS AS AEGIS ASHORE MISSILE SYSTEM ALTERNATIVE: REPORTS

- Yusuke Tanabe

TOKYO -- Floating islands equipped with missile defense systems are being discussed by the Japanese government as an alternative to the suspended surface-to-air Aegis Ashore missile program, it has emerged. In the past, use of megafloat structures has been proposed to help with works connected to moving the U.S. Marine Corps Air Station Futenma, in the city of Ginowan in Okinawa Prefecture, southernmost Japan, to the proposed site of a new base in nearby Henoko, in the city of Nago. But the idea was ultimately not pursued due to a number of issues including technological hurdles. Megafloats are made with methods based on shipbuilding technology, in which metal boxes are connected together and put out to float in the sea. Among their advantages are that they have shorter construction times compared to land reclamation, and they have a lower impact on the environment.

The Aegis Ashore program, which was set to be installed in the northwestern prefecture of Akita and Yamaguchi Prefecture in west Japan, was suspended over concerns that the booster technology to propel the weapons could fall onto residential areas and other places. By having the technology launch from equipment floating over the Sea of Japan, it appears that safety issues would be solved. But it's unknown from a technological perspective whether the system could withstand bad weather and other variables. Artificial islands floating on the sea can also be approached by outside parties easily, and defending them is difficult. There are also issues including how to dispatch troops for security.

Megafloats have seen use before, including in 2011 after the Great East Japan Earthquake, when they were successfully used to temporarily store low concentrations of polluted water generated by the resultant accident at the Tokyo Electric Power Co.'s Fukushima Daiichi Nuclear Power Station. But there are very few previous instances of the technology being used in Japan. When the now-dissolved Democratic Party of Japan was in power between 2009 and 2012, plans including one for a floating island runway in Nago had been scrapped. The majority of cases have ended with insurmountable issues being presented by technology and high construction costs, among other problems. A senior official at the Japan Self-Defense Forces said, "In

recent years, damage from typhoons has been getting worse. If we were to make a floating island that could greatly withstand wind and waves, it's possible that costs would balloon."

(Japanese original by Yusuke Tanabe, Political News Department)

Source: mainichi.jp; 23 June 2020

WHY JAPAN DECIDED TO SCRAP A KEY U.S. MISSILE DEFENSE SYSTEM

- Mari Yamaguchi

(TOKYO) — Japan's National Security Council has endorsed plans to cancel the deployment of two costly land-based U.S. missile defense systems aimed at bolstering the country's capability against threats from North Korea, the country's defense minister said Thursday. The council made its decision Wednesday, and now the government will need to enter negotiations with the U.S. about what to do with payments and the purchase contract already made for the Aegis Ashore systems.

The council is expected to also revise Japan's basic defense plan later this year to update the missile defense program and scale up the country's defense posture. Defense Minister Taro Kono announced the plan to scrap the systems earlier this month after it was found that the safety of one of the two planned host communities could not be ensured without a hardware redesign that would be too time consuming and costly.

The Japanese government in 2017 approved adding the two Aegis Ashore systems to enhance the country's current defenses consisting of Aegis-equipped destroyers at sea and Patriot missiles on land. Defense officials have said the two Aegis Ashore units could cover Japan entirely from one station at Yamaguchi in the south and another at Akita in the north. The plan to deploy the two systems already had faced a series of setbacks, including questions about the selection of one of the sites, repeated cost estimate hikes that climbed to 450 billion yen (\$4.1 billion) for their 30-year operation and maintenance, and safety concerns that led to local opposition.

Kono said Japan has signed contract worth nearly half the total cost and paid part of it to the U.S. Prime Minister Shinzo Abe, who has steadily pushed to step up Japan's defense capability, said last week that in light of the scrapping the government would need to reconsider Japan's missile defense program and do more under the country's security alliance with the U.S. Abe said the government would consider the possibility of acquiring preemptive strike capability, a controversial plan that critics say would violate Japan's war-renouncing Constitution.

Source: time.com; 25 June 2020

PN SEEKS STRONGER NAVAL TIES WITH INDIA

- Philippine News Agency

The Philippine Navy (PN) expressed hope for stronger ties with the Indian Navy following its assistance to the repair of the BRP Ramon Alcaraz, whose engine room caught fire off Cochin, India on May 7. “Your support in this unfortunate incident is way beyond our expectations and is a testament of your sincerity in deepening our Navy-to-Navy partnership. Rest assured that the Philippine Navy remains committed to this partnership and we hope to expand this relationship as we seek better ways to make our seas safer and more secure for everyone,” PN flag-officer-in-command Vice Admiral Giovanni Carlo Bacordo said in his letter to Indian Navy chief-of-naval staff, Admiral Karambir Singh last week and a copy of which was acquired by the Philippine News Agency (PNA) Sunday night.

BRP Ramon Alcaraz, one of the two ship components of Naval Task Force 82 deployed to the Middle East in January for possible repatriation missions of overseas Filipino workers following tensions between Iran and the United States, was starting its voyage home when a fire broke out in its engine room last May 7. The ship immediately returned to Cochin, India for repairs with BRP Davao Del Sur (LD-602) initially deciding to go home alone. However, Cyclone Amphan which battered eastern India and Bangladesh forced BRP Davao del Sur to return to the Indian port to seek shelter. Repairs to the BRP Ramon Alcaraz’s engine room were completed on May 27 and both ships resumed their voyage home on May 31 and arrived home in Manila on June 12. “We are likewise thankful for the airlift and one of our sailors to INHS Sanjivani Naval Hospital under the leadership of Surgeon Commodore MS Honwad for the treatment of his second-degree burns,” Bacordo said. He also expressed his thanks and appreciation to the Indian Navy’s Southern Naval Command, which is under Vice Admiral AK Chawla, for being receptive to the entire PN contingent. “Again, accept my sincerest thanks for the Indian Navy’s invaluable assistance and allow me to convey my fervent wishes for your continuing success in leading the Indian Navy’s sustained resolve to be a global maritime force,” Bacordo said.

Source: idrw.org; 23 June 2020

INDIGENOUS PRODUCTION OF FIGHT CATEGORY EQUIPMENT AT 45 PERCENT, HUGE OPPORTUNITY FOR MSMEs: NAVY OFFICIAL

- PTI

NEW DELHI: The indigenous production of "fight" category equipment, which includes weapons and radars, for the Indian Navy is nearly 45 percent and it is a huge opportunity for micro, small and medium enterprises (MSMEs) that can enhance their manufacturing, said a senior Navy official on Tuesday. "Indian shipyards have already 130 ships and submarines. And further, 46 ships and submarines have been ordered for construction in our shipyards. It is a matter of pride that with the help of our stakeholders, almost 90 per cent of equipment in the "float" category and 65 per cent of the equipment in the "move" category is indigenous production," said Rear Admiral S N Alamanda at a webinar.

The "float" category encompasses all material, equipment and systems associated with the structures and fittings of the ship's hull. Equipment under the "move" category encompasses propulsion systems, power generation turbine engines, firefighting systems. Equipment under the "fight" category encompasses all types of ship borne weapons and sensor systems that affect the combat capability of the ship. "Our cumulative indigenous production in the 'fight' category, which covers weapons, sensors, radars and advanced stealth technology, is presently relatively low close to 45 per cent," Alamanda noted.

"In fact, I see this percentage as a huge and a great opportunity for MSMEs to enhance their contribution to the Navy," he said at the webinar titled "Indigenisation and Modernisation requirements of Indian Navy" that was organised by the PHD Chamber of Commerce. "In achieving this, our MSMEs will need to work out various options, including collaborating with large scale units and also interacting with the DRDO very closely," the Rear Admiral added. Commodore R K Kamboj said at the webinar that indigenisation is required for equipment like aircraft landing systems, night vision equipment, multi function phased array radars, low frequency interception radars and surface to surface missiles.

Source: economictimes.com; 23 June 2020

SHIPPING, PORTS AND OCEAN ECONOMY

30% OF SEAFARERS HAVE COMPLETED THEIR EMPLOYMENT AGREEMENTS: INTERCARGO

- Marcus Hand

With 25 June marking the annual IMO ‘Day of the Seafarer’ Intercargo has again highlighted the plight of seafarers stranded on their vessels and says its fortunate there have not been fatal accidents at sea. Intercargo estimates that 30% of all seafarers on cargo vessels have now completed terms under the Seafarer Employment Agreement (SEA) and at least 5% of all seafarers have been on board for over 12 months in breach of the Maritime Labour Convention (MLC). This year’s Day of the Seafarer calls on seafarers to be recognised as “key workers” globally which would allow the freedom to travel and conduct crew changes despite travel restrictions imposed by many nations due to the Covid-19 pandemic.

“The industry is fortunate that it has not yet seen a spate of fatal accidents at sea and an invisible humanitarian crisis is unfolding around us,” stated Dimitris Fafalios, chairman of Intercargo. We at Intercargo are calling on governments, health, maritime and airline authorities together around the world to promptly resolve this untenable situation. Not only must we consider the severe effect on the mental health and well-being of seafarers, but also the very real danger to safe operations posed by exhausted and mentally fatigued crew on board.”

Spyros Tarasis, Vice-Chairman of Intercargo stated: “The 2020 Day of the Seafarer campaign pays tribute to seafarers and acknowledges their sacrifice and the issues they face. Many seafarers have been away from home for months and are unsure when they will be able to return home due to travel restrictions. “We join calls for governments around the world to treat seafarers with the respect and dignity they deserve so that they can continue to provide the vital services that keep world trade moving.”

Source: seatrade-maritime.com; 24 June 2020

SHIPPING LINES ORDERED TO ALLOT CARGO SPACE FOR FOOD PRODUCTS

MANILA – Following government’s drive to provide food security for the people amid the coronavirus disease 2019 (Covid-19) pandemic, Transportation Secretary Arthur Tugade has ordered domestic shipping lines to provide no less than 12 percent of their vessel’s cargo capacity per voyage for the exclusive accommodation of agricultural and food products and to extend preferential shipping rates on agricultural and food products. Tugade issued the directive through Department Order (DO) 2020-007 on June 24 in line with the government’s action to contain the Covid-19 threat and to mitigate the pandemic’s adverse effects by mobilizing the necessary resources and taking the appropriate response measures. “At this period when the danger of the pandemic is still very real, the people must be assured that the production and delivery of food and agricultural items will not be hampered or delayed. This is important as many parts of the country remain under quarantine measures where movement is restricted,” Tugade said. He said his directive will assure the people of food supply “as each vessel being operated by a domestic shipping line will be carrying needed food and agricultural products to various destinations in the country.”

For his part, Department of Trade and Industry (DTI) Secretary Ramon Lopez lauded the apt and timely response of DOTr, saying the DO is crucial and complementary to the trade department's recently issued memorandum on the lifting of purchase limits on basic goods. "From the very beginning, the stable supply and unhampered movement of all food and non-food cargoes has always been our priority. This is to prevent the unreasonable increase in the prices of goods, especially at this time of the pandemic when sources of income are limited," Lopez said. Meanwhile, Department of Agriculture spokesperson Noel Reyes said the DOTr’s move will greatly help consumers by easing up the tight supply of food necessities and stabilize their prices.

“Agriculture Secretary William Dar welcomes this favorable development, that puts into flesh the recommendation of the IATF Task Group on Food Security to maintain the unhampered movement of food products from the farms and fishing areas to major consumption centers, particularly in Metro Manila,” Reyes said. Reyes said the products include pork from Mindanao “where there is surplus, that should be shipped regularly to Luzon and Visayas and thus ease up the tight supply and stabilize prices for the benefit of consumers.”

Apart from allocating exclusive space for food and agricultural products, the order likewise enjoined domestic shipping lines to extend a discount of no less 40 percent from their published shipping rates for all agricultural and food products shipped on their vessels. The DO notes, however, that domestic shipping companies are not prevented from extending a higher discounted shipping rate for agricultural and food products transported by their vessels.

Tugade has ordered the Maritime Industry Authority to issue the guidelines of the DO within 30 days of its effectivity. He also ordered the Philippine Ports Authority to ensure that domestic shipping companies comply with the department order, and to impose sanctions for non-compliance.

Source: pna.gov.ph; 28 June 2020

INTEL INPUTS BEHIND PHYSICAL INSPECTION OF CHINESE GOODS AT CUSTOMS: REPORT

- PTI

Amid heightened border tensions with China, Indian customs officials have started physical inspection of all consignments coming from the neighbouring country based on intelligence inputs. Although there is no formal order, but Indian customs authority is inspecting consignments originating from China that arrive at any airport or port, government sources with direct knowledge of the development said. Authorities are checking documents, goods and valuation, they said.

"No orders, verbal or written, have been issued to any port by customs or by the Central Board of Indirect Taxes and Customs (CBIC) to bar or not to accept containers from China. If in some cases, some containers are held up then they are for the intelligence input and on the basis of risk assessment, as a routine exercise," a government source said.

Sources further said that although physical inspection is resulting in delayed clearance of goods, in current situation the customs officials will have to work in coordination with other intelligence agencies. The move has resulted in a retaliatory action by China with Indian exporters complaining of shipments being held up in Hong Kong.

Indian Exporters body FIEO flagged concerns over holding up of their consignments at Hong Kong and Chinese ports in response to a similar action being taken by Indian authorities at Mumbai and Chennai port. FIEO has written to the Commerce Secretary to take up the matter with the Central Board of Indirect Taxes and Customs (CBIC) as there is no formal instruction or circular to Indian Customs authorities for 100 per cent checking of Chinese consignments at domestic ports.

Last week, 20 Indian army personnel, including a Colonel, were killed in a violent confrontation with Chinese troops in the Galwan Valley in eastern Ladakh, which has increased border tensions between the two countries.

About 14 per cent of India's total imports are from China. Between April 2019-February 2020, India has imported goods worth \$62.4 billion, while exports to the neighbouring country stood at \$15.5 billion. The main goods imported from China includes clocks and watches, musical instruments, toys, sports goods, furniture, mattresses, plastics, electrical machinery, electronic equipment, chemicals, iron and steel items, Fertiliser, mineral fuel and metals. India has time and again raised concerns over widening trade deficit with China which stood at about \$47 billion during April-February 2019-20.

Source: vnexpress.net; 14 June 2020

MARINE ENVIRONMENT

NEARLY 20 PERCENT OF EARTH'S SEAFLOOR IS NOW MAPPED

- Justine Calma

In a decisive leap, researchers have now mapped roughly one fifth of the world's ocean floor. When an initiative to map the entire seafloor by 2030 took off in 2017, just 6 percent had been mapped to modern standards.

The project, called Seabed 2030, is a collaboration between the Japan-based Nippon foundation and the intergovernmental organization the General Bathymetric Chart of the Ocean (GEBCO). The endeavor will help scientists better understand how tsunamis form and how much we can expect sea levels to rise as a result of climate change. The complete map could also aid industries looking to exploit oil, gas, and minerals in the deep sea. And the data is important for telecom companies laying down undersea cables from coast to coast. The maps and data collected so far are available to the public.

"It's encouraging to see what working collaboratively, across the globe, can achieve. Seabed 2030 will continue to seek out new partnerships and technological advancements," Jamie McMichael-Phillips, director of the project, said in a June 21st press release announcing its progress. "Everyone has a part to play in contributing to our ocean mapping journey: a journey that will greatly benefit humanity."

While an area double the size of Australia is now charted, that leaves an area twice the size of Mars left to tackle, McMichael-Phillips told BBC News. To figure out what the bottom of the ocean "looks like," multibeam echo sounders send sound pulses down to the seabed from ships. The technology then calculates depth by measuring how long it takes for the ping to bounce back up to the surface.

Gathering high resolution bathymetric data — the topography of the seafloor — gets harder to do in deeper water. It would take one ship 350 years to survey the 93 percent of the world's oceans that are deeper than 200 meters, according to Seabed 2030. So the project crowdsources data from governments, academic researchers, and commercial ships. In the future, uncrewed vehicles could also be deployed to bring down the time, cost, and labor currently needed to make the project a success. For now, Seabed 2030 estimates that meeting the project's 2030 goal could cost as much as \$3 billion.

Source: theverge.com; 22 June 2020

ARE PENGUINS BECOMING A MAJOR CAUSE OF CLIMATE CHANGE?

- Vaishali Dar

Penguins have been in the news for all the right reasons recently. Some time back, the birds from Kansas City Zoo in Missouri made headlines when they visited the nearby Nelson-Atkins Museum of Art, wandering around, admiring the artworks during the lockdown.

Recently, however, scientists from the University of Copenhagen in Denmark took a research trip to South Georgia (the world's largest colony of king penguins, where around 150,000 breeding pairs live in huge colonies) to investigate the effect of glacier retreat and penguin activity on greenhouse gas emissions. The penguins there spend the day eating krill, squid and fish, feeding their chicks, and producing guano (poop). Penguins, in fact, poop a lot, and tend to crowd closely together. This means that the guano inevitably accumulates in distinct amounts, so much so that it can be used to spot potential penguin colonies with satellites! It was evident in the research by scientists that climate change is kicking off with an influx of penguin poop, which produces high levels of nitrous oxide, known as the laughing gas. It's adding to greenhouse gases, contributing significantly to climate change. A penguin guano—indicative of their nitrogen-rich meals of krill and fish—melds with soil bacteria. "The maximum emissions are about 100 times higher than in a fertilised Danish field. It is truly intense—not least because nitrous oxide is 300 times more polluting than carbon dioxide," explains Professor Bo Elberling of the University of Copenhagen's Department of Geosciences and Natural Resource Management in the study published on Maryland-based news site Science Daily.

Climate change is having a greater impact on the Antarctic than other parts of the world, as per a report published by Greenpeace International. The glaciers are melting faster than they form, raising global sea levels. Less sea ice means penguins have to swim further to find food. Krill, or tiny crustaceans, are vital for almost all Antarctic life, providing food for many other species, including blue whales and Adélie penguins. But climate change is causing problems for krill as well. They depend on the edges of the sea ice for food and shelter. And as the oceans absorb more carbon dioxide, the water is becoming more acidic for krill.

The population of chinstrap penguins in western Antarctica has fallen by 77% since they were last surveyed in the 1970s, say scientists studying the impact of climate change. A media report on Reuters quotes Steve Forrest, a conservation biologist: "The declines are dramatic. Something is happening to the fundamental building blocks of the food chain. We've got less food abundance that's driving these populations down lower and the question is, is that going to continue?"

As per a recent news report published in The Guardian, scientists have created the first large-scale map of microscopic algae on the Antarctic peninsula, potentially creating a source of nutrition for other species. Biologists from the University of Cambridge and

the British Antarctic Survey spent six years to detect and measure the green snow algae, using a combination of satellite data and ground observation.

The Earth Science Communications Team at NASA's Jet Propulsion Laboratory, California Institute of Technology, reported that the NASA-funded team in 2018 unlocked some long-standing secrets about the Adélie penguin, a species that can provide an early warning of threats to Antarctica's delicate ecosystem. Casey Youngflesh, a graduate student from Stony Brook University, New York, along with Stony Brook associate professor Heather Lynch, are part of the team, tapping into Landsat satellite imagery to see if Adélie's diet has been varying in response to Antarctica's changing climate.

"It is interesting that no obvious trend in diet was seen over time, despite changes in the physical environment," Youngflesh said. "Since the abundance and distribution of Adélie penguins has changed dramatically over the last 40 years and scientists had hypothesised that a shift in diet may have played a role. These findings are important for our understanding of how the Antarctic ecosystem functions and how this system might change in the future."

However, until a new ecosystem is in place, it has become extremely important for experts and biologists to observe the rapid change in the climate of the continent where the animal population is in danger.

Source: financialexpress.com; 28 June 2020

NEW MAPS REVEAL THE TRUE SIZE AND SHAPE OF EARTH'S 'LOST' 8TH CONTINENT ZEALANDIA

- Aylin Woodward

Scientists confirmed that the submerged land mass, named Zealandia, was its own continent in 2017. But they hadn't been able to map its full breadth until now. On Monday, researchers from GNS Science in New Zealand announced that they'd mapped the shape and size of the continent in unprecedented detail. They put their maps on an interactive website so that users could virtually explore the continent.

"We've made these maps to provide an accurate, complete, and up-to-date picture of the geology of the New Zealand and southwest Pacific area – better than we have had before," Nick Mortimer, who led the work, said in a statement. Mortimer and his colleagues mapped the bathymetry surrounding Zealandia – the shape and depth of the ocean floor – as well as its tectonic profile, showing where Zealandia falls across tectonic-plate boundaries. The maps reveal new information about how Zealandia formed before it became submerged underwater millions of years ago.

An underwater continent nearly 2 million square miles in size

Zealandia's area is nearly 2 million square miles (5 million square kilometers) – about half the size of Australia. But only 6 percent of the continent is above sea level. That part underpins New Zealand's north and south islands and the island of New Caledonia. The rest is underwater, which makes Zealandia challenging to survey. To better understand the submerged continent, Mortimer and his team mapped both Zealandia and the ocean floor around it. The bathymetric map they created (below) shows how high the continent's mountains and ridge rise toward the water's surface.

It also depicts coastlines, territorial limits, and the names of major undersea features. The map is part of a global initiative to map the planet's entire ocean floor by 2030.

The second map the GNS scientists made (below) reveals the types of crust that make up the underwater continent, how old that crust is, and major faults. The continental crust – the older, thicker kind of Earth's crust that forms landmasses – is shown in red, orange, yellow, and brown. The oceanic crust, which is generally younger, is in blue. Red triangles show where volcanoes are. This map also reveals where Zealandia sits across various tectonic plates, which of those plates are being pushed under the other in a process known as subduction, and how quickly that movement is happening. Studying the tectonic machinations that underpin Zealandia today can reveal clues about how the continent formed in the first place.

Zealandia's 85 million-year-old origins

The concept of Zealandia is 25 years old. Geophysicist Bruce Luyendyk coined the term in 1995. Luyendyk previously told *Business Insider* that he never intended for the term to describe a new continent. Rather, the name originally referred to New Zealand and a collection of submerged chunks of crust that broke off the ancient supercontinent Gondwana about 85 million years ago. "The reason I came up with this term is out of convenience," Luyendyk said. "They're pieces of the same thing when you look at Gondwana. So I thought, 'Why do you keep naming this collection of pieces as different things?'" Gondwana formed when Earth's ancient supercontinent, Pangea, split into two fragments. Laurasia in the north became Europe, Asia, and North America. Gondwana in the south dispersed to form modern-day Africa, Antarctica, South America, and Australia. Geologic forces continued to rearrange these land masses, and Zealandia was forced under the waves about 30 million to 50 million years after it broke off Gondwana as the largest tectonic plate – the Pacific Plate – slowly subducted beneath it.

These maps show Zealandia is a continent like the other 7.

Until 2017, Zealandia was classified as a "microcontinent," like the island of Madagascar. But according to Mortimer, Zealandia ticks all the boxes for continent status: It has clearly defined boundaries, occupies an area greater than 386,000 square miles (1 million square kilometers), is elevated above the surrounding ocean crust, and has a continental crust thicker than that oceanic crust.

These new maps therefore offer further evidence that the underwater land mass should be considered the eighth continent, Mortimer added. "If we could pull the plug on the world's oceans, it would be quite clear that Zealandia stands out," he told *Science News*

in 2017, adding, "If it wasn't for the ocean level, long ago we'd have recognised Zealandia for what it was – a continent."

This article was originally published by Business Insider.

Source: [sciencealert.com](https://www.businessinsider.com/saharan-dust-2020-6); 26 June 2020

SAHARAN DUST WILL DELIVER STUNNING 'EYE CANDY' THIS WEEK - HERE'S WHY

- Marshall Shepherd

I want to start with a shout out to my subdivision neighbor Tiffany Martin for inspiring this article. The educator sent my wife a message asking if African dust was really heading to the United States. I am usually the resource for our friends and family when there are questions about the Earth. My answer was "yes." African dust plumes are actually pretty common each year, but I think University of Miami meteorologist Brian McNoldy captures it best in his Facebook post, "These 'SAL Outbreaks' (Saharan Air Layer) are very common this time of year, but this one is just more dense than normal, so also more noticeable." It is likely that parts of the United States will be able to see the dust this week. Here's why?

A few days ago NASA issued a press release discussing these outbreaks and how satellite data is used to detect them. The image above was captured by the VIIRS instrument aboard NASA-NOAA's Suomi NPP satellite. A large plume of Saharan dust (light brown) is clearly evident. According NASA, "Normally, hundreds of millions of tons of dust are picked up from the deserts of Africa and blown across the Atlantic Ocean each year." These dust plumes, like many things within the Earth system, have multiple implications such as:

- Fortifying beaches in the Caribbean
- Fertilizing soils in the Amazon
- Degrading air quality (and complicating some health/respiratory ailments in North American, the Caribbean, and South America)

There is even scientific evidence that the dust can impact hurricane formation. According to Jason Dunion, a NOAA researcher quoted on a NASA website, "a dust storm has three main components that can suppress a hurricane." Those three components (really dry air, wind shear associated with strong mid-level winds, and the dust itself) hinder the development of clouds and in the case of the wind shear, can even destroy the structure of the storm. As the hurricane season advances to the peak season (August to October), meteorologists will continue to keep a close eye on Saharan dust. There is even scientific evidence that the dust can impact hurricane formation. According to Jason Dunion, a NOAA researcher quoted on a NASA website, "a dust storm has three main components that can suppress a hurricane." Those three components (really dry air, wind shear associated with strong mid-level winds, and

the dust itself) hinder the development of clouds and in the case of the wind shear, can even destroy the structure of the storm. As the hurricane season advances to the peak season (August to October), meteorologists will continue to keep a close eye on Saharan dust.

Source: [forbes.com](https://www.forbes.com); 22 June 2020

THE ARCTIC CIRCLE HIT 100°F SATURDAY, ITS HOTTEST TEMPERATURE EVER

- Trevor Nace

This past weekend, a small Russian town in the Arctic Circle hit a scorching temperature, 100.4 degrees Fahrenheit. While the temperature has to be verified by experts, if it stands, it will be the hottest temperature ever recorded in the Arctic Circle.

The small Russian town of Verkhoyansk is known for its brutally cold winters and is one of the coldest towns on Earth. However, temperatures in recent months have skyrocketed double digits above average temperatures. The average high temperature in Verkhoyansk in June is 68°F, meaning this record day was over 30 degrees hotter than average. For reference, the coldest month of the year Verkhoyansk is January where the high is, on average, -44°F. Yes, you read that correct, negative 44 degrees Fahrenheit is the average high temperature in January. Before this record-breaking high temperature, temperatures in Siberia were, on average, 18 degrees higher than normal in May. This past May broke the record for the hottest May since record keeping.

The Arctic Circle, which is defined as anything above 66.5°N latitude, has experienced more extreme warming as a result of climate change than lower latitudes (tropics). It is well known that the poles warm faster as a result of climate change. For example, the average increase in temperature on Earth over the past 40 years is 1.44°F. In comparison, the Arctic has warmed by more than 3.5°F during the same period, more than double the global average. According to NASA's research, Earth's poles warm faster than the rest of the planet because of large-scale energy transport from atmospheric processes. The poles receive their heat from atmospheric and oceanic systems pushing heat from the tropics to the poles. As warming continues, these systems are exacerbated, bringing disproportionately more heat to the poles.

Warming is also increased due to the change in reflectivity (albedo) of the poles. As sea and land ice (which is very reflective) melt and reveal rock and vegetation (which is much less reflective) there is a positive feedback loop that causes the surface to warm, melt more ice, become less reflective, and continue on the cycle of warming. Thus, those living in high latitude countries (Canada, Russia, Scandinavia, etc.) will experience significantly more warming than those living in low latitude countries (Brazil, Indonesia, Ecuador, etc.). This dramatic warming of the Arctic up to triple-digit temperatures was not expected to happen until 2100 from climate change. But

the reality of warming due to climate change has exceeded expectations as warming, particularly in the poles, has caused record-breaking temperatures in the past decade.

Source: forbes.com; 22 June 2020

GEOPOLITICS

BEIJING'S CHINA PAKISTAN ECONOMIC CORRIDOR LEADS TO NOWHERE

- Preity Upala

The Belt and Road Initiative, formerly known as One Belt, One Road, is China's imperialistic and expansionist agenda in large parts of Eurasia, South Asia and Africa.

Dubbed the "New Silk Road," it connects China to Africa through seaways and highways. A flagship of the BRI is the China Pakistan Economic Corridor, a collection of infrastructure projects that are currently under construction throughout Pakistan.

Originally valued at \$46 billion, the estimate of CPEC projects is now \$87b., and only a quarter of which have been completed. CPEC was intended to rapidly modernize Pakistani infrastructure and strengthen its economy by the construction of modern transportation networks, numerous energy projects and special economic zones (SEZs).

However, according to the Center for Strategic and International Studies, these SEZs have remained largely empty today and the longstanding challenges have only become more exacerbated. Facing unsustainable debt levels, growth rates down to 3%, five-year-high inflation rates and soaring deficits, Pakistan's economy is definitely moving in the reverse direction.

CPEC is based on a false premise that a nation needs these massive economic projects to be prosperous. It is apparent that no one is willing to pay for these projects in the end, as they will never make any money from it. Analysts have said these are bridges that don't go anywhere. Some of the ambitious projects like a high-speed train from Beijing to Moscow will never have any takers.

The debt quotient of this corridor is about \$80b., 90% of which will be paid for by Pakistan in the form of national debt. Pakistan itself knows it will not be able to pay China back and will slowly lose sovereignty of its own land. These projects do not appear to have the potential to be profitable or successful and will not prove to be a good economic investment for China.

Ultimately, this is a Chinese "colonial" adventure that will never bear fruit. There have been many reports out of China that indicate the Pakistani government itself is trying to sabotage the CPEC project. Chinese officials have been recorded as being incredibly frustrated with Islamabad's actions or lack thereof so far. Like most adventures, there is no opacity. China sets the price, Pakistan gets the bill and ends up with substandard infrastructure it cannot service. It will be known as the "trillion dollar blunder."

Source: jpost.com; 20 June 2020

JAPAN SAYS U.S. HASN'T REQUESTED MORE MONEY TO HOST AMERICAN TROOPS

- Reuters

TOKYO -- The United States has not asked Tokyo to pay more to keep its troops in the country, Japan's defence minister said, after a report cited former National Security Adviser John Bolton as saying he conveyed President Donald Trump's demand for an \$8 billion annual payment. "Negotiations over the cost of hosting (American troops) have not started yet," Defence Minister Taro Kono told a regular news conference on Tuesday. "The Japanese government has not received any request from the United States with regard to this issue." The current agreement that covers the 54,000 U.S. troops stationed in Japan expires in March 2021. Kono was asked about a Kyodo News report citing Bolton's upcoming book "The Room Where It Happened: A White House Memoir", in which he writes that he relayed Trump's request to a senior Japanese government official for the \$8 billion payment during a trip to Japan last July. The memoir is due for publication on Tuesday.

Asked whether he thought the current cost of hosting the U.S. military was appropriate, Kono said: "The Japan-U.S. alliance is a public asset that contributes to this region's peace and stability. An arrangement that is lucrative for one side won't last long." Kono said he could not comment specifically on what Bolton had written since he had been unsuccessful so far in getting a copy of the book.

Bolton's reported claim is in line with a Foreign Policy report last year that Trump sought a quadrupling of annual payments to around \$8 billion as part of his efforts to push its allies to hike their defence spending.

Source: tuoitrenews.vn; 23 June 2020

KIRIBATI'S PRO-CHINA LEADER WINS RE- ELECTION IN BLOW TO TAIWAN

- Kiki Siregar

SYDNEY (Reuters) -- The leader of small but strategically located Kiribati has won a closely watched presidential run-off after campaigning on a pro-China platform, in a set back to Taiwan's hopes to re-establish ties with a country that ditched it for Beijing last year. The result, confirmed to Reuters by the island nation's High Court, came after a fierce campaign that pitted the pro-Beijing leader against ally-turned-rival Banuera Berina, who is sympathetic to Taiwan. China has taken an increasingly assertive role in the Pacific, to concern in Washington and Canberra which tend to view the region as their backyard.

Taneti Maamau secured another four-year term with 26,053 votes compared with his rival's 17,866, results showed, amid high voter turnout for the strategically located central Pacific nation. Maamau won the most votes in 16 of the 23 island constituencies. Opposition spokesman Rimon Rimon told Reuters by phone from Kiribati that he expected the government to start approaching opposition lawmakers to form a majority in parliament after loyalties were evenly split going into the vote. Maamau's office did not immediately respond to Reuters' questions.

The result helps lock in the new diplomatic relationship between Tarawa and Beijing, ending any immediate bid by Taiwan to reclaim a diplomatic ally in the Pacific after it was muscled out of its alliances with Kiribati and Solomon Islands last year. China claims democratic Taiwan as its territory with no right to state-to-state ties. Taiwan's foreign ministry said it would keep paying close attention to developments in Kiribati and continue to cooperate with like-minded countries to work for "security, stability, freedom, openness and democratic governance in the Pacific region".

Taiwan now has formal diplomatic ties with just 15 countries worldwide, four of which are in the Pacific - Marshall Islands, Nauru, Tuvalu and Palau. Former president Anote Tong told Reuters that the Kiribati government would now need to deliver on its campaign promises. "The people have been persuaded to back the government based on the lavish promises made during the campaign," Tong said by phone. "The next challenge will be to deliver on those promises, which will inflate the budget."

Tong, who retired from politics in 2016, oversaw a shift in Kiribati's ties from China to Taiwan during his first term in 2003. Kiribati has a small land mass yet controls large swathes of ocean through its string of coral islands. It is also home to a Chinese space-tracking station mothballed since 2003, though its current status is unclear.

Source: asianikkei.com; 23 June 2020

ASEAN LEADERS CITE 1982 UN TREATY IN SOUTH CHINA SEA DISPUTE

- Associated Press

South-east Asian leaders said a 1982 UN oceans treaty should be the basis of sovereign rights and entitlements in the South China Sea, in one of their strongest remarks opposing China's claim to virtually the entire disputed waters on historical grounds.

The leaders of the Association of Southeast Asian Nations (Asean) took the position in a statement issued by Vietnam on behalf of the 10-country bloc on Saturday. Asean leaders held their annual summit by video call on Friday, with the coronavirus pandemic and the long-running territorial disputes high on the agenda. The Asean statement said: "We reaffirmed that the 1982 UNCLOS is the basis for determining maritime entitlements, sovereign rights, jurisdiction and legitimate interests over maritime zones."

The leaders were referring to the United Nations Convention on the Law of the Sea (UNCLOS), a 1982 international agreement that defines the rights of countries to the

world's oceans. It also demarcates stretches of waters called exclusive economic zones where coastal states are given the right to exclusively tap fishery and fuel resources. The leaders said in the statement that "UNCLOS sets out the legal framework within which all activities in the oceans and seas must be carried out". Chinese officials did not immediately comment on the statement. Three south-east Asian diplomats told AP, however, it marked a significant strengthening of the regional bloc's assertion of the rule of law in a disputed region long regarded as an Asian flashpoint. They spoke on condition of anonymity due to a lack of authority to speak publicly.

As Asean's leader for 2020, Vietnam oversaw the drafting of the chairman's statement. This was not a negotiated document but circulated among other member states for consultation. Vietnam has been one of the most vocal critics of China's assertive actions in the disputed waters. China has taken increasingly aggressive steps to bolster its claims to the strategic waters. It vaguely marks them with a "nine-dash line" that overlaps with the coastal waters and territorial claims of Asean member states Vietnam, Malaysia, the Philippines and Brunei. Taiwan has also staked a claim in vast stretches of the disputed waters. In July 2016, an international arbitration tribunal invalidated China's vast historical claims to the waters based on UNCLOS. China refused to participate in the case and dismissed the ruling as a sham.

In recent years, China transformed seven disputed reefs into missile-protected island bases, including three with military-grade runways. It continues to develop them in ways that have sparked protests and alarmed rival claimant states, as well as the US and its Asian and western allies. In recent months, China has come under fire for what rival claimants said were aggressive actions in the disputed waters as countries were scrambling to deal with the coronavirus crisis. Vietnam protested in April after a Chinese coastguard ship rammed and sank a boat with eight fishermen off the Paracel Islands. The Philippines backed Vietnam and protested against new territorial districts announced by China in large swaths of the sea.

Source: [theguardian.com](https://www.theguardian.com); 27 June 2020

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